AMERICAN FARMER.

RURAL ECONOMY, INTERNAL IMPROVEMENTS, PRICES CURRENT.

" *O fortunatos nimium sua si bona norint*
" *Agricolas.*" . . . VIRG.

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AGRICULTURE.

The RUTA BAGA *or* SWEDISH TURNIP.

FROM COBBETT'S YEAR'S RESIDENCE.

(*Concluded from No. 5, page 35.*)

USE OF AND MODE OF APPLYING THE CROP.

It is harder to say, what uses this root may *not* be put, than what uses it *may* be put to, in the feeding of animals. They are eaten greedily by sheep, horn cattle, and hogs, in their raw state. *Boiled or steamed* (which is better) no *dog* that I ever saw, will refuse it. Poultry of all sorts will live upon it in its cooked state. Some dogs will even eat it raw; a fact that I first became acquainted with from perceiving my shepherd's dog eating it in the field along with the sheep. I have two *Spaniels* that come into the barn and eat it raw; yet they are both in a fine condition. Some of the horses will nearly live upon it in the raw state; others are not so fond of it.

Let me give an account of what I am doing now (in the month of April) with my crop.

It is not pretended, that this root *measure for measure*, is equal to *Indian Corn in the ear*. Therefore, as I can get Indian Corn in the ear for a half dollar a bushel, and as I sell my Ruta Baga for half a dollar a bushel at New York, I am very sparing of the use of the latter for animals. Indeed, I use none at home, except such as have been injured, as above-mentioned, by the delay in the harvesting. These damaged roots apply in the following manner.

Twice a day I take about two bushels, and scatter them upon the grass for fifteen Ewes with their lambs, and a few wether sheep, and for seven stout store-pigs, which eat with them. Once a day, I fling out a parcel of the refuse that have been cut from the roots sent to market, along with cabbage leaves, and stems, parsnip fibres, and the like. Here the working oxen, hogs, cow, sheep and fowls, all feed as they please. All these animals are in an excellent condition. The cow has *no other* food; the working oxen a lock of hay twice a day; the Ewes an ear of Indian Corn each; the pigs nothing but the roots; the fowls and ducks and turkeys are never *fed* in any other way, though they know how to feed themselves whenever there is any good feed to be found above ground.

I am *weaning* some pigs, which, as every one knows, is an affair of *milk* and *meal*. I have neither. I give about three buckets of *boiled* Ruta Baga to *seven pigs* every day, not having any convenience for steaming; and two *baits of Indian Corn in the ear*. And, with this diet, increasing the quantity with the growth of the pigs, I expect to turn them out of the stye fatter (if that be possible) than they entered it. Now, if this *be so*, every farmer will say, that this is what never was done before in America. We all know how important a thing it is to *wean* a pig *well*. Any body can wean them without *milk* and *meal*; but, then, the pigs are good for nothing. They remain three months afterwards and never grow an inch; and they are, indeed, not worth having. To have milk, you must have cows, and cows are vast consumers! To have cows, you must have *female labour*, which, in America, is a very precious commodity. You cannot have *meal*, without sharing, in his kind, pretty liberally with the miller, besides bestowing labour, however busy you may be, to carry the corn to mill and bring the meal back. I am, however, speaking here, of the pigs from my English breed; though I am far from supposing, that the common pigs might not be weaned in the same way.

Sows with young pigs, I feed thus: boiled Ruta Baga twice a day. About three ears of Indian Corn a piece twice a day. As much offal Ruta Baga *raw*, as they will eat. Amongst this boiled Ruta Baga, the pot-liquor of the house goes, of course; but then the dogs, I dare say, take care, that the best shall fall to their lot; and as there are four of them pretty fat, their share cannot be very small. Every one knows, what good food, how much *meal* and *milk* are necessary to sows which have pigs. I have no milk, for my cows has not yet calved. And, then, what a *chance* concern this is; for, the sows may perversely have pigs at the time when the cows *do not please to give milk*; or, rather, when they poor things, without any fault of theirs, are permitted to *go dry*, which never need be nor never ought to be the case. I, had a cow once, that made more than two pounds of butter during the week and had a calf on the Saturday night. Cows always ought to be milked to the very day of their calving, and during the whole of the time of their suckling their calves. But, "sufficient unto the day is the evil thereof." Let us leave this matter, till another time. Having accidentally mentioned *cows*, I will just observe, that, in the little publication of Mr. CRAMP, mentioned above, as having been printed by the Board of Agriculture, it was stated, and the proof given, that his *single cow* gave him, *clear profit*, for several successive years, more than *fifty pounds sterling a year*, or upwards of *two hundred and twenty dollars*. This was *clear profit*; reckoning the food and labour, and taking credit for the calf the butter, and for the skim milk at *a penny a quart* only. Mr. CRAMP's was a *Sussex* cow. Mine were of the *Alderny* breed; little small boned things; but, two of my cows, fed upon *three quarters of an acre of grass ground*, in the middle of my shrubbery, and fastened to pins in the ground which were shifted twice a day, made *three hundred pounds of butter* from the 28th of March to the 27th of June. This is a finer country for cattle than England; and yet, what do I see!

This difficulty about feeding sows with young pigs and weaning pigs, is one of the greatest of hindrances to improvement; for, after all, what animal produces flesh meat like the hog? Applicable to all uses, either fresh or salted, is the meat. Good in all its various shapes. The animal killable at all ages. Quickly fatted. Good if half fat. Capable of supporting an immense burden of fat. Demanding but little space for its accommodation; and yet, if grain and corn and milk are to be their principal food during their lives, they cannot multiply very fast; because many upon a farm cannot be kept to much profit. But if, by providing a sufficiency of Ruta Baga, a hundred pigs could be raised on a farm in a year, and carried on till fatting time, they would be worth, when ready to go into the fatting stye, fifteen dollars each. This would be something worth attending to; and, the farm *must* become rich from the manure. The Ruta Baga, taken out of the heaps early in April, will keep well and sound all the summer; and, with a run in an orchard, or in any grassy place, it will keep a good sort of hog always in a very-thriving and even *fleshy* state.

This root, being called a *turnip*, is regarded as a *turnip*, as a common turnip, than which nothing can be much less resembling it. The common turnip is a very poor thing. The poorest of all the roots of the bulb kind, cultivated in the field; and the Ruta Baga, all taken together, is perhaps the very best. It loses none of its good qualities by being long kept, though dry all the while. A neighbour of mine in Hampshire, having saved a large piece of Ruta Baga for *Seed*, and having, after harvesting the seed, accidentally thrown some of the roots into his yard, saw his hogs eat these old roots, which had borne the seed. He gave them some more, and saw that they eat them greedily. He therefore went and bought a whole drove, in number about forty, of lean pigs of a good large size, brought them into his yard, carted in the roots of his seed Ruta Baga; and, without having given the pigs a handful of any other sort of food, sold out his pigs as *fat porkers*. And, indeed, it is a fact well known that sheep and cattle as well as hogs will thrive upon this root after it has borne seed, which is what, I believe, can be said of no other root or plant.

When we feed off our Ruta Baga in the fields, in England, by sheep, there are small parts left by the sheep; the *shells* which they have left after scooping out the pulp of the bulb; the tap root; and other little bits. These are pecked out of the ground; and when washed by the rain, other sheep follow and live upon these. Or, in default of other sheep, hogs or cattle are turned in, in dry weather, and they leave not a morsel.

Nor are the *greens* to be forgotten. In England, they are generally eaten by the sheep, when these are turned in upon them. When the roots are taken up for uses at the home-stead, the greens are given to store pigs and lean cattle.—I cut mine off while the roots were in the ground, and gave them to fatten cattle, upon grass land alternately with Indian Corn in the ear; and in this way, they are easily and most profitably applied, and they come, too, just after the grass is gone from the pastures. An acre produces about four good wagon loads of greens; and they are taken off fresh as they are wanted, and at the same time, the roots are thus made ready for going, at once, into the heaps. Pigs, sheep, cattle; all like the greens as well as they do the roots. Try any of them with the greens of *White* Turnips; and if they touch them, they will have changed their natures, or at least their tastes.

The Mangel Wurtzle, the Cabbage, the Carrot, and the Parsnip, are all useful; and the *latter*, that is to say, the *Parsnip*, very valuable indeed; but the *main* cattle crop is the Ruta Baga. Even the *white* turnip, if well cultivated, may be of great use; and, as it admits of being sown *later*, it may be often very desirable to raise it. But reserving myself to speak fully, in a future part of my work, of my experiments as to these crops, I shall now make a short inquiry as to the value of a crop of Ruta Baga, compared with the value of any other crop. I will just observe, in this place, however, that I have grown *finer* carrots, parsnips and Mangel Wurtzle, and even finer cabbages, than I ever grew upon the richest land in Hampshire, though not a seed of any of them was put into the ground until the month of June.

A good mode, it appears to me, of making my proposed comparative estimate, will be to say, *how I would proceed*, supposing me to have a farm of my own in this island, of only one hundred acres. If there were not twelve acres of orchard, near the house, I would throw as much grass land to the orchard as would make up the twelve acres, which I would fence in an effectual manner, against small pigs as well as large oxen.

Having done this, I would take care to have fifteen acres of *good* Indian Corn, well planted, well suckered, and well tilled in all respects. Good deep ploughing between the plants, would give me forty bushels of shelled corn to an acre; and a ton to the acre of fodder for my four working oxen, and three cows and my sheep and hogs, of which I shall speak presently.

I would have *twelve* acres of Ruta Baga, *three* acres of Early Cabbages, an acre of Mangel Wurtzle, an acre of Carrots and Parsnips, and as many White Turnips as would grow between my rows of Indian Corn after my last ploughing of that crop.

With these crops, which would occupy thirty-two acres of ground, I should not fear being able to keep a good house in all sorts of meat, together with butter and milk, and to send to market nine quarters of beef and three hides, a hundred early fat lambs, a hundred hog sweighing twelve score, as we call it in Hampshire, or two hundred and forty pounds each, and a hundred fat ewes. These, all together, would amount to about three thousand dollars, exclusive of the cost of a hundred ewes and of three oxen; and, I should hope, that the produce of my trees in the orchard, and of the other fifty-six acres of my farm would pay the rent and the labour; for, as to *taxes*, the amount of which is not worth naming, especially after the sublime spectacle of that sort, which the world beholds in England.

I am, you will perceive, not making any account of the price of Ruta Baga, Cabbages, Carrots, Parsnips and white Turnips, at *New York*, or any other market. I *now*, indeed, sell Carrots and Parsnips at three quarters of a dollar the *hundred* by tale; cabbages (of last fall) at about three dollars a hundred, and White Turnips at a quarter of a dollar a bushel. When this can be done, and the distance is within twenty or thirty miles, on the *best road in the world*, it will of course, be done; but, my calculations are built upon a supposed consumption of the whole upon the farm, by animals of one sort or another.

My feeding would be nearly as follows. I will begin with February; for, until then the Ruta Baga does not come to its sweetest taste. It is like an apple, that must have time to ripen; but, then, it retains its goodness much longer. I have proved, and especially in the feeding of hogs, that the Ruta Baga is never so good, until it arrives at a mature state. In February, and about the first of that month, I should begin bringing in my Ruta Baga, in the manner before described. My three oxen, which would have been brought foward by other food to be spoken of by and by, would be *tied* up in a stall, looking into one of those fine commodious barn'-floors which we have upon this island. Their stall should be *warm*, and they should be kept well littered, and cleaned out frequently. The Ruta Baga, just chopped into large pieces with a spade or shovel, and tossed into the manger to the oxen, at the rate of about two bushels a day to each ox, would make them completely fat, without the aid of corn, hay, or any other thing. I should, probably, kill one ox at Christmas, and, in that case, he must have had a longer time than the others upon other food. If I killed one of the two remaining oxen in the middle of March, and the other on the first of May, they would consume 266 bushels of Ruta Baga.

My hundred ewes would begin upon Ruta Baga at the same time, and as my grass ground would be only twelve acres, until after hay time, I shall suppose them to be fed on this root until July, they will always eat it and thrive upon it. They will eat about eight pounds each a day; so that, for 105 days it would require a hundred and twenty thousand pounds weight, or two thousand four hundred bushels.

Fourteen breeding sows to be kept all the year round, would bring a hundred pigs in the spring, and they and their pigs would, during the same 150 days consume much about the same quantity; for though the pigs would be small during these 150 days, yet they eat a great deal more than a sheep in proportion to their size, or rather bulk. However, as they would eat very little during 60 days of their age, I have rather over-rated their consumption.

Three cows and four working oxen, would during the 150 days, consume about one thousand bushels, which, indeed, would be more than sufficient, because, during a great part of the time, they would more than half live upon Corn stalks; and, indeed, this to a certain extent, would be the, case with the sheep. However, as I mean that every thing should be of a good size, and *live well*, I make ample provision.

I should want, then, to raise *five hundred* bushels of Ruta Baga upon each of my twelve acres; and why should I not do it, seeing that I have this year raised six hundred and forty bushels upon an acre, under circumstances such as I have stated them. I lay it down, therefore, that, with a culture as good as that of Indian Corn, any man may, on this island, (where Corn will grow) have 500 bushels to the acre.

I am now come to the first of July. My oxen are fatted and disposed of. My lambs are gone to market, the last of them a month ago. My pigs are weaned, and of a good size. And now my Ruta Baga is gone. But, my ewes, kept well through the winter, will soon be fat upon the twelve acres of orchard and hay ground, aided by my three acres of early cabbages, which are now fit to begin cutting, or, rather, pulling up. The weight of this crop may be made very great indeed. Ten thousand plants will stand upon an acre, in *four feet ridges*, and every plant ought to weigh *three pounds* at least. I have shown before how advantageously Ruta Baga *transplanted* would follow these cabbages, all through the months of July and August. But what a crop of *buckwheat* would follow such of the cabbages, as came off in *July!* My cabbages, together with my hay fields and grain fields after harvest, and about forty or fifty wagon loads of Ruta Baga *greens*, would carry me along well until December [the cabbages being planted at different times;] for my ewes would be sold fat in July, and my pigs would be only increasing in demand for food; and the new hundred ewes need not, and ought not, to be kept so well as if they were fatting, or had lambs by their side.

From the first of December to the first of February Mangel Wurtzle and White Turnips would keep the sheep, and cattle, and breeding sows, plentifully; for the latter would live well upon Mangel Wurtzle; and my hundred nogs, intended for fatting, would be much *more* than *half* fat upon the carrots and parsnips. I should, however, more probably, keep my parsnips until spring, and mix the feeding with carrots with the feeding with corn, for the 1st month, or fifteen days with regard to the fatting hogs. None of these hogs would require more than three bushels of corn each, to finish them completely. My other three hundred bushels would be for sows giving suck; for the ewes, now and then in wet weather; and for other occasional purposes.

Thus all my *hay*, and *oats*, and *wheat*, and *rye*, might be sold, leaving me the straw for litter. These, surely, would pay the rent and the labour; and, if I am told, that I have taken no account of the mutton, and lamb, and pork, that my house

would demand, neither have I taken any account of *a hundred summer pigs*, which the fourteen sows would have, and which would hardly fail to bring two hundred dollars. Poultry demand some food; but three parts of their raising consists of care; and if I have nobody in my house to bestow this care, I should of course, have the less number of mouths to feed.

But, my *horses*. Will not they swallow my *hay* and my *oats?* No: for I want no horses. But, am I never to *take a ride*, then? Ay, but, if I do, I have no right to lay the expense of it to the account of the farm. I am speaking of how a man may live by and upon a farm. If a merchant spend a thousand a year, and gain a thousand, does he say, that his traffic has gained him nothing? When men "lose money by farming," as they call it, they forget that it is not the farming, but other expenses, that take away their money. It is, in fact, they that rob the farm, and not the farm them. Horses may be kept for the purpose of going to church, or to meeting, or to pay visits. In many cases, this may be not only convenient, but necessary, to a family; but, upon this island, I am very sure, that it is neither convenient nor necessary to a farm. "What!" the ladies will say, "would you have us to be shut up at home all our lives; or be dragged about by oxen." By no means; not I! I should be very sorry to be thought the author of any such advice. I have no sort of objection to the keeping of horses upon a farm; but I do insist upon it, that all the food and manual labour required by such horses, ought to be considered as so much taken from the clear profits of the farm.

I have made sheep, and particularly *lambs*, a part of my supposed stock; but I do not know, that I should keep any beyond what might be useful for my house. *Hogs* are the most profitable stock, if you have a large quantity of the food that they will *thrive* on. They are *foul* feeders; but they will eat nothing that is poor in its nature; that is to say, they will not *thrive* on it. They are the most able *tasters* in all the creation; and that which they like best, you may be quite sure has the greatest quantity of nutritious matter in it, from a white turnip to a piece of beef. They will prefer meat to corn, and cooked meat to raw; they will leave parsnips for corn or grain; they will leave carrots for parsnips; they will leave Ruta Baga for carrots; they will leave cabbages for Ruta Baga; they will leave Mangel Wurtzle for cabbages; they will leave potatoes [both being raw] for Mangel Wurtzle. A *white* turnip they will not touch, unless they be on the point of starving. They are the best of *triers*. Whatever they prefer is sure to be the *richest* things within their reach. The parsnip is, by many degrees, the richest root; but, the seed lies long in the ground; the sowing and after culture are works of great niceness. The crop is large with good cultivation; but, as a *main* crop, I prefer the Ruta Baga, of which the crop is immense, and the harvesting, and preserving, and application of which, are so easy.

The farm I suppose to be in *fair condition* to start with. The usual grass seeds sown, and so forth, and every farmer will see, that under my system, it must soon become rich as any garden need to be, without my sending men and horses to the water side to fetch ashes, which have been brought from Boston, or Charleston, an average distance of seven hundred miles! In short, my stock would give me, in one shape or another, manure to the amount in utility of more than a thousand tons weight a year of common yard manure. This would be ten tons to an acre *every year*. The farm would, in this way become more and more productive; and, as to its being *too rich*, I see no danger of that; for a broadcast crop of wheat will, at any time, tame it pretty sufficiently.

Very much, in my opinion, do those mistake the matter, who strive to get a *great breadth* of land, with the idea, that, when they have *tired* one field, they can let it lie, and go to another. It is better to have one acre of good crop, than two of bad or indifferent. If the one acre can, by *double* the manure and *double* the labour in tillage, be made to produce as much as two other acres, the one acre is preferable, because it requires only half as much fencing, and little more than half as much harvesting, as two acres. There is many a ten acre of land near London, that produce more than any common farm of two hundred acres. My garden of *three quarters of an acre* produced more, in value, last summer, from June to December, than any *ten acres* of oat land upon Long Island, though I there saw as fine fields of oats as I ever saw in my life.—A *heavy crop* upon *all* the ground that I put plough into, is what I should seek, rather than to have a great quantity of land.

The business of carting manure from a *distance*, can, in very few, if any cases, answer a profitable purpose. If any man would give me even horse dung at the stable door, four miles from my land, I would not accept of it, on condition of fetching it. I say the same of spent ashes. To manure a field of ten acres, in this way, a man and two horses must be employed twenty days at least, with twenty days wear and tear of wagon and tackle. Two oxen and two men do the business in two days, if the manure be on the spot.

In concluding my remarks on the subject of Ruta Baga, I have to apologize for the desultory manner in which I have treated the matter; but, I have put the thoughts down as they occurred to me, without much time for arrangement, wishing very much to get this first part in the hands of the public, before the arrival of the time for the sowing of Ruta Baga this present year. In the succeeding parts of the work, I propose to treat of the culture of every other plant that I have found to be of use upon a farm; and also to speak fully of the *sorts* of cattle, sheep, and hogs, particularly the latter. My experiments are now going on; and, I shall only have to communicate the result, which I shall do very faithfully, and with as much clearness as I am able. In the meanwhile, I shall be glad to afford an opportunity, to any persons who may think it worth while to come to Hyde Park, of *seeing* how I proceed. I have just now [17th April] planted out my Ruta Baga, Cabbages, Mangel Wurtzle, Onions, Parsnips, &c. for seed. I shall begin my *earth burning* in about fifteen days. In short, being convinced, that I am able to communicate very valuable experiments; and not knowing how short, or how long, my stay in America may be, I wish very much to leave behind me whatever of good I am able, in return for the protection which America has afforded me against the fangs of the boroughmongers of England; to which country, however, I always bear affection, which I cannot feel towards any other in the same degree, and the prosperity and honour of which, I shall, I hope, never cease to prefer before the gratification of all private pleasures and emoluments.

From Sinclair's Code of Agriculture.

ON DRAINING.

Relieving land from superfluous moisture, is one of the most important branches of husbandry. Unless that be accomplished, every other improvement, of which the soil is susceptible, must often be unsuccessfully attempted. Fortunately, no department in agriculture, has been of late more anxiously studied, nor with greater practical success.

The basis was laid by the discoveries of a farmer in Warwickshire, (Joseph Elkington,) who was led to it by an accident.* It is a happy event for society, when such accidents occur to those, who have sense sufficient to avail themselves, of hints thus fortuitously suggested.

In discussing this subject, the following particulars shall be considered: 1. The advantages of draining; 2. The causes of wetness; 3. The sorts of drain commonly used; 4. The instruments employed; and 5. The modes of draining the different soils, and the objects to which that improvement is applicable.

1. *Advantages of Draining.*

The benefit of draining is experienced, 1. In arable land; 2. In grass; 3. In woods and plantations; 4. In the improvement of wastes; 5. In the climate; and, 6. in various miscellaneous particulars.

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* In the year 1764, Elkington began to drain some fields on his farm of Princethorpe, which were so extremely wet, that it occasioned the rotting of several hundreds of his sheep. He had dug a trench for that purpose about four or five feet deep, which did not however reach the *principal body of subjacent water*, from which the evil arose. *By accident*, while he was deliberating what was to be done, a servant was passing with an iron crow or bar, for fixing sheep hurdles in an adjoining part of the farm. Having a suspicion that his drain was not deep enough, and desirous to know what sort of strata lay under it, he took the iron bar, and forced it down about four feet below the bottom of the trench. On pulling it out, to his astonishment, a great quantity of water burst up through the hole thus made, and ran along the drain. This led him to the knowledge, that wetness may often be produced by water confined farther below the surface of the ground, than it was possible for the usual depth of drains to reach, and that an augur would be a useful instrument to apply in such cases. From his success in this, as well as other modes of draining, and the readiness with which he communicated the principles on which his operations were conducted, to the Board of Agriculture, the British parliament granted him a reward of one thousand pounds. He taught his art to Mr. Johnstone, who has drawn up a valuable treatise on the subject, from which much assistance has been derived in preparing this section.

1. *Arable Land.*—While land remains in a wet state, the manure laid upon it, is, comparatively speaking, of little use; the seed sown often perishes; the crops are sickly, and later of ripening; and the operations of harvest are attended with uncertainty and danger; whereas, when land is thoroughly drained, it can be ploughed at any season with advantage; it is easily managed and kept clean at a moderate expense; every exertion of good husbandry is attended with success; it suffers less from the inclemency of the seasons; the produce is generally ample; the quality of the grain is excellent; and the farmer will thrive, where his predecessor, cultivating a wet and undrained soil, was impoverished, or perhaps totally ruined.

2. *Grass Land.*—The beneficial effects of draining on grass land are also very great. Rushes and other aquatic plants soon disappear; the finer grasses rise in abundance; the pastures maintain a greater number of cattle and sheep; the stock becomes superior in size and quality, and less subject to disease; that destructive malady, *the rot*, so fatal to sheep, is prevented; and if the land be mown, the hay produced is so much improved in quality, as to be doubly valuable.

3. *Woods and Plantations.*—Draining is likewise an improvement of the most essential consequence to plantations, where they do not consist of aquatic trees. Land, intended for planting forest trees, if wet, particularly requires draining; for the roots of trees, penetrating deeper than those of any other plants, the necessity of removing the *under*, as well as the surface water, is evident. Where this has been attended to, the plantations thrive, and the trees grow to a considerable size, much faster than can otherwise be expected.

4. *Improvement of wastes.*—The improvement of wet moors, must be preceded by draining, stagnant water being injurious to all the valuable classes of plants. Care in particular should be taken to render the land dry, before the application of lime, dung, or compost, otherwise the attempt will be ineffectual. At present, commons lying waste, are, in respect of drainage, in a most wretched state. The soil, in the first instance, absorbs as much water as it can contain, and the surplus water remains on the surface, in a stagnant state highly injurious to the healthiness of the neighbourhood.

5. *Melioration of Climate.*—By the removal of stagnant water, and the prevention of noxious exhalations, the climate is rendered more healthy and genial, both to animal and vegetable life. Indeed, since the introduction of draining into this country, agues, and other similar distempers, occasioned by the humidity of the soil, and the consequent impurity of the atmosphere, have been prevented, in a great measure, and the general health of the inhabitants has been greatly improved. Much water is discharged into the atmosphere, by spouty land, through the aquatic plants and coarse herbage which it carries: and it is a curious and important circumstance, in an experiment recorded, that while the air immediately above a wet soil, was only 57° of Fahrenheit, the dry part of the same field, and of similar soil, was about 100°.

6. *Miscellaneous advantages.*—The drainage of one tract of land, may likewise furnish water by which the accommodation of another may be promoted for various useful purposes; as, for irrigation; for mills, and other machinery; for supplying houses, ponds, enclosures, canals, or artificial navigations. By peculiar modes of applying the arts of draining also, the quantity of water found in mines and quaries, may be diminished, either by cutting off the resources above, or by letting down that which often impedes their working into a porous stratum below.

On the whole, there is no means by which the value of land can be advanced, or from which when usefully applied, so many advantages can be derived, at a moderate expense, as that of draining. The owner is benefited by an increase of rent; the occupier by that of produce; and the public, by being thus supplied with greater quantities of the most essential commodities, and by having a source of useful employment furnished to the labouring classes of the community. Unfortunately, both in England and Scotland, the greater part of the counties stand more in need of draining than of manuring; and there are very few districts where a knowledge of this essential means of improvement, is so general or so perfect as it ought to be."*

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* There is, probably, no agricultural process, which has been the subject of more injudicious remarks, among the people of this country, than that of draining. An undue importance has been attached to it on the one hand, while no importance at all has been given to it on the other. In a country like America, where labour is scarce and dear, and lands are plenty and comparatively cheap, the truth would seem to lie between these extremes. Labour with us is a given quantity, and very limited, too in its amount. The great question among us ought, therefore, to be, how this given quantity of labour can be most economically and profitably employed. If the amount of labour at our command, will afford us a greater return of profit, if expended on our dry, than it would on our wet lands, then certainly every principle of economy would require us to put it on the former, rather than the latter. If the return would be equal, then other circumstances, besides more profit, must determine us what course to take. Now it is an unquestionable fact, that we have not a sufficiency of labour to cultivate our dry lands to the greatest advantage; and it is another unquestionable fact, that the same expense, generally speaking, put upon our dry, or up-lands, will afford a greater return of profit, than if put upon our wet lands. If so, the conclusion is irresistible, that we ought, with our present supply of labour, to cultivate our dry lands, to the neglect of our wet, rather than our wet lands, to the neglect of our dry; nor is the conclusion less irresistible, that we *cannot* cultivate our wet lands, unless we do, at the same time, neglect our dry lands.

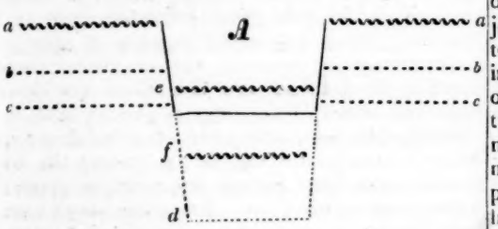
Although the question of draining, on an extensive scale, would thus appear to be conclusively settled, it by no means follows, that draining can in *no case* be attempted with advantage. It may often happen, and actually does happen, that the situation and other circumstances of a piece of low, wet ground, are such as would justify an attempt to drain it, even on a most rigid adherence to the principles just laid down. It may be in the vicinity of a large town, where the value of land is so great, that the expense of draining would be amply reimbursed. It may be situated near one's house, or barn, where the comparative value of land is much enhanced by that particular fact, and the land would, if reclaimed, be of more advantage to the proprietor, than other land purchased and improved with the same cost. It may be so situated as to be not only useless, but a nuisance, the removal of which might be necessary to the due cultivation of adjoining lands, or the profitable enjoyment of other privileges. But the making of such lands more productive, is not always the only motive which would justify the draining of them. A regard to health, mere convenience, and decent appearance, will sometimes require that the process be undertaken. As it respects the first, if it do but clearly appear, that the draining of such lands will contribute to its preservation, there surely can be no question as to the expediency of the measures. As it respects convenience, of that every one must be his own judge, whether the convenience will equal the expense in a particular case, or not. All that needs to be here said of that is, cases do often occur in which draining is of very great importance in that respect. With regard to decency of appearance, it may be observed, that on almost every farm of any considerable size, there are found detached pieces of wet, boggy, poachy land, inconsiderable perhaps in extent, but which are an incumbrance in the way of improving the adjoining land, and greatly disfigure the general appearance of the farm. It may be asked here, what if the farm *is* disfigured; is appearance *profit!* It sometimes certainly is; it is *always* worth *something!* and, though like other things of value, it may be purchased at too dear a rate, it does not follow that it is *always* so acquired. One thing is clear, account for it as we will, a slovenly farmer is seldom a thrifty one, and a nice, neat, and tidy farmer is seldom an unthrifty one.

Let it be taken, then, for granted, that draining, on a limited scale, may be attempted to advantage in this country: the question occurs, what is the best mode of doing it? The author of the Code of Agriculture, has treated of two kinds of drains, the open and the covered. It is believed, that in this country, where the expense of making them would be so great, and where land is so plenty, the saving of ground by means of covering the drains, cannot, in general practice, be any object. Nor does it appear that any advantage is derived from such drains, on account of their accomplishing the main object more effectually. No further remarks, therefore, will here be made respecting drains of that description; but what is said, will be confined to open drains, as it respects their size, and the manner of making them.

Our drains are almost universally made both too narrow and too shallow. By being narrow, frosts and the treading of cattle, soon fill them up, and the expense of making them is thus thrown away. This evil is increased by leaving,

the earth, which is thrown out in making them on their sides. This earth, by lying near the margin of the drain, causes that side on which it is placed, to fall in the sooner, and then follows it itself. In this way all the earth which was taken out, is replaced, and the land reduced to its original state. If the drain is small, a moderate quantity of earth, grass, or other matter easily clogs it, and obstructs the passage of the water. Whereas if it be large, exactly the reverse takes place. If the drain is wide, and the earth taken from it, is removed to a distance, neither cattle nor frost can fill it up; but in spite of the trampling of the one, and the heaving of the other, a hollow must still remain.

But drains ought to be deep, as well as wide. Besides the increase of capacity which additional depth gives them, there are other advantages resulting from the same source. Not only is the under stratum of water, if there be one, in that case carried off, but more of the surface water, even where that is the sole cause of wetness, is removed by a deep, than by a shallow drain. A drain both wide and deep, even in a piece of ground where there is no outlet for the water to pass off, may oftentimes leave the surface dry, and that too, where there is no perforation made into a dry stratum beneath.



In the first place, let, *a*, *a*, represent the surface of a wet tract of ground, which it is proposed to drain. Suppose that there is an outlet for the water to pass through down some declivity, and that the earth is completely saturated with water. Let *A*, represent a transverse section of a drain, cut in this piece of ground. By means of this drain, we will suppose that the upper stratum of earth will be left dry, down to *b*, and that the water rises in the drain no higher than *e*. Now if the drain be cut deeper still, say down to *d*, it is evident that the water will not then rise so high in the drain as before; that is, while the general wetness of the land remains the same. Let it rise to *f*. It is evident from bare inspection, that now, since the water in the whole drain, *a*, *e*, *f*, *d*, is down to *f*, a greater depth of earth from the surface downward, say to *c*, must be left dry, than when the water stood at *e*.—Thus far we have supposed that the water in the drain runs off through some outlet. But suppose that there is no outlet, and that a piece of wet poachy land not covered with standing water, is surrounded by other land higher than itself.

Let *a*, be a drain cut in it. As soon as the earth which filled the space now occupied by the drain is removed, the water will ooze into it from the adjoining strata of earth, *a*, *b*, *c*; and as the water has now a greater space to fill, it must, of course, sink below the surface *a*, and leave a portion of it dry. The more the capacity of the drain is increased, the more this effect will take place. If the drain is cut down into a hard stratum of earth not pervious to water, the effect will be greater still, because in that case no water oozes from the sides of this stratum to help fill the drain, but the drain is filled only by the water which lies above such stratum. We often meet with land of the last description, wet and poachy, but on which no water ever rises above the surface, unless in peculiarly wet seasons. A drain cut wide and deep in such land, might sometimes answer a good purpose, on the principles last mentioned. If the earth taken from the drain should be spread upon the land, the latter would thereby be raised, and perhaps otherwise improved. The loss of land which the drain would occasion, would be more than made up by the superior quality which the remainder would acquire.

The most expeditious, effectual, and economical mode of making a drain, would undoubtedly be to use oxen, and a *scraper*, or ox-shovel, as it is sometimes called; an instrument well known in this country, in the making of roads. In some cases this mode might not answer, as in very miry grounds, and lands just cleared of timber. But where lands are very miry, if the process is begun at the outlet for the water, and there indeed, it ought always to be begun, the next adjoining portion will generally be made so dry as to allow being trod upon in a proper season; and in this way a drain may, by degrees, be carried on towards the centre. In nineteen cases out of twenty, drains may probably be effected in this mode. Where the ground will admit of it, two men, a boy, and two yoke of oxen, will accomplish more business of this sort in a day, than half a dozen men in the same time, with only spades and shovels. Whenever the labour of cattle can be substituted, in this country, for human labour, policy requires it to be done. Such a substitution is certainly practicable in the present case, and merits consideration. The surface of wet and miry lands is usually full of inequalities; if a *scraper* is employed in draining them, the earth taken from the drain is easily landed in any hollow spot which needs to be filled; and if there are no such hollows, or they have already been filled, the earth may be spread over the surface in such a manner as to do the most good. If the earth is not wanted for other purposes, it is recommended to drop and spread it, if practicable, in such a manner as to leave the general surface of the land sloping towards the drain, that the water may the more readily incline towards it, and pass off. At some distance below the surface in peat grounds, there is usually found a hard stratum of earth, called in the common language of our farmers, *hard-pan*. This *hard-pan*, if ploughed into, scraped out, and spread on the surface, would greatly improve the texture of such soils. This furnishes another argument in favour of using a scraper in draining, for in no other way can the upper earth taken out of the drains, be so cheaply removed, and put on the adjoining grounds: nor in any other way can the hard-pan be so easily broken up and carried off, nor in any other way, oftentimes, can suitable earth be so well obtained for the purpose of spreading it over the surface, with a view to improve the texture of the soil. If the object be to pile the earth from the drains into heaps with a view to composts, this purpose is completely accomplished by means of the *scraper*.

When peat-grounds are drained, as a general rule, it will be found best, to keep them for a considerable time afterwards in pasture. If well pastured, the coarse natural grasses are kept back, and better ones take their place. White clover, in particular, seems to delight in such soils, when treated in this manner. But another important advantage is derived from pasturing. The trampling of the cattle serves to destroy the bogs which usually deform such grounds, and to give consistence and compactness to the soil. This last is a very important consideration, for one of the greatest defects of such soils is, their extreme perosity and lightness. Where the soil consists almost entirely of peaty matter, with little or no mixture of real earth, and extends to a considerable depth, it ought seldom or never to be ploughed for the purpose of tillage. It is labour and expense absolutely thrown away, to attempt the tillage of such a soil, until a portion of loam or other earth has been incorporated with it. It is of little value even for pasture, until the process of draining it, and the treading of the animals kept on it, have increased its compactness: then indeed it becomes, if sufficiently dry, of real value, and no kind of land perhaps, will yield to it in productiveness of summer feed. But ploughing alone undoes what has been thus gained, and increases, rather than diminishes, its natural perosity. Such lands may be made capable of tillage by the addition of earthly matter, and the more compact that matter the better. Yet after all the expense of carting such earthly matter, especially, from a distance, will be so great as will seldom justify a resort to this mode of improvement, in the present situation of this country. The time may arrive, when it may be done with profit; and in particular cases, it may be attempted now; but as a general rule, it will be found for a good while to come, that to *pasture* is the best mode of treating our peat lands, where the peat is deeper than the reach of the plough. [*It may sometimes answer to mow them.*] Further reasons might be given for this opinion; but this is not the place for a minute inquiry into the subject. Although it may not be proper to bring lands of this description into tillage, it may nevertheless, be sometimes advantageous to drain them with a view to pasture solely. Such pastures are often very productive; cattle are fond of feeding on the grasses which they produce, and will often give them the preference to those which grow on uplands, even when the latter are of the best artificial kinds.

[*Am. Ed.*

Upon the advantages of propagating from the roots of old ungrafted Fruit Trees. By T. Andrew Knight, Esq. F. R. S. &c. President of the London Horticultural Society.

The progressive influence of debility and decay, upon varieties of old fruit trees, is now so generally admitted, that it is wholly unnecessary to advance facts or arguments to prove it. The

general law of nature appears to be, that no living organized being shall exist beyond a imited term of years; and that law must be obeyed. It is, nevertheless, in the power of man, to extend the lives of individual vegetable beings far beyond the period assigned by nature; and parts of the same annual plant may be preserved through many years, perhaps through ages, though it cannot be rendered immortal.

I have quoted in a former communication, the statement of Columella, that cuttings from bearing branches of the vine did not afford durable trees; and this fact appears to have been known at an earlier period; for Virgil, whose practical knowledge of planting and grafting, was probably very limited, and who, therefore, may be supposed to give the opinion of some previous writer, has directed the planter not to choose cuttings from the upper branches of trees:

" Neve flagella
" Summa pete aut summa destringe ex *arbore*
" *plantas*." GEO. lib. ii. 299.

As the roots of trees elongate, like the branches, by parts annually added to their previous extremities, it appears probable, that the powers of life would become expended as soon in the points of the *roots*, as in the *bearing branches*. Experience, however, warrants a different conclusion.

I obtained plants, from some detached parts of the extremities of the *roots* of old ungrafted pear and apple trees, and as soon as these were large enough to afford grafts, I selected other grafts of similar size from the *bearing branches* of the *same trees*, and some of *each* were inserted in *similar stalks*, and in several instances, two in the same large stalk; and whenever inserted, the grafts which had been taken from the bearing branches, proved, *by no means*, able to contend with their more hardy, vigorous rivals. The latter produced thorns like those of young seedling trees; and although other circumstances lead me to believe, that trees raised from roots in the manner above-mentioned, will not live as long as seedling plants; I am nevertheless confident, that they will live very long, and afford much more hardy and productive trees than can possibly be obtained from the *bearing branches*. Similar experiments, with the same results, were made with grafts of a plum tree.

Duhamel has stated the original tree of the Charmontelle pear, to have been alive and in health, later than the middle of the last century; and as the tree was not then very old, for a pear tree, it is probably still living. If plants could be obtained from its roots, they would prove a valuable acquisition to the gardeners of France, and one of still more value to the English gardeners; for we possess no winter pear of so much merit and long duration, which succeeds so well without the protection of a wall.

I am not by any means satisfied that the original tree of the Ribstone Pippin, is not now growing in England; and that the seed from which the first tree sprang, and not the tree itself, came from France; for I have never seen any plate of it, nor description of any apple very like it, in any foreign catalogue. A cutting from the root of the supposed original tree might, I conclude, readily be obtained, and no effort to preserve so valuable a variety ought to be omitted. Coe's Golden-drop Plum, if it be an English seedling, is most amply entitled to the same care; and the possessor of the asserted original tree, may prove his claim to the honour of having raised it (which I have here questioned) by raising trees of the same variety from its roots.

No further care or trouble is necessary to insure success, than to obtain cuttings of the root in the autumn, (November) about a foot long, and not less than a quarter of an inch in diameter. These should be planted so deeply, that no more than half an inch in length of each cutting should appear above the soil. I have usually placed the cuttings under an east or west wall, and have perfectly succeeded with those of the pear, the apple, the plum, and cherry, the only kinds of fruit trees which I have hitherto subjected to such experiments.

TRANSLATED FROM THE FRENCH.

Process for extracting Spirit from Potatoes, practised in Austria.

The following operation is practised with success, in a particular province establishment, near Vienna, in Austria. As it is easy, lucrative, and within the reach of all cultivators, we think it useful to give, here, the exact process.

Take one hundred pounds of potatoes, well washed, cooked by steam, and mashed under a roller; then take four pounds of malted barley, dried and ground in a mill. The process is commenced by diluting the malt in a little luke warm water, which is then thrown into the tub, or vessel, for fermentation; twenty-five pounds, or pints, of boiling water are then poured in on the malt, all which is to be well stirred. The mashed potatoes are then added, and the whole is stirred with paddles of wood, until the several particles of each ingredient appear equally dispersed through the whole mass.

Six or eight ounces of brewer's yest are then diluted in about 225 pounds of water, more or less heated, so that the whole mass shall assume the temperature of 12 to 15 degrees of *Reaumur*, to all which is then added, from six to eight ounces of good brandy.

The fermentation tub ought to be placed in a cellar, or in any close place whatever, where the temperature may be kept, by means of a stone, at 15 or 18 degrees—the mixture is then to be left tranquil. It is necessary, that the malt tub be sufficiently large, to admit of its contents rising at least six or seven inches, without overflowing. If, in spite of this precaution, it should overflow, it will be necessary to take out a little, which may be put back when the mass begins to subside. The tub is then re-covered, and the fermentation is to finish quietly, and generally lasts five or six days. When the fermentation has terminated, may be known by this: when the tub is uncovered, nothing is seen but a clear liquid, the potatoes having fallen to the bottom. It is then drawn off and distilled.

The distillation is made by steam, (*se fait à la vapeur*) with a still of wood, or of copper, constructed on the Rumford plan. The produce of the first distillation is redistilled. When the fermentation has been good, one may expect to obtain, from a hundred weight of potatoes, five or six pints of brandy, the strength of 20 degrees of the areometer, (an instrument to measure the strength of liquor.) This spirit preserved during some months, in barrels, or new pipes, and then slightly (*caramalee*) coloured with burnt sugar, as French brandy is, will sustain a competition with brandy made of wine, of common quality. It has a natural taste without any burnt flavour.

The proprietor of this distillery, prepares and distills one thousand pounds of potatoes per day. in two operations, of five hundred pounds each; which gives him about sixty pints of good brandy. One may judge from that experiment, what would result from it in operation through the whole year.

The residue of the distillation is employed in the feeding of cattle, which drink it with pleasure diluted; and it is found to augment the milk of cows. Sixty sheep consume about five pints of *boullie* each, per day—half in the morning, and the other half in the evening.

The quantity of malt necessary for the fermentation, is ground every week.

BALTIMORE:
FRIDAY, MAY 7, 1819.

LIVE STOCK.

THE HOG.—The prolific nature of the hog, its rapid growth, the excellence of its flesh, as food for man,* and the small proportion of offal which it throws off when killed and managed with skilful economy, have justly obtained for this animal an eminent rank amongst our domestic quadrupeds.

The raising of the hog, may be advantageously made to constitute a part of a well regulated system, in almost all of our agricultural operations, as well as in several other establishments, not immediately connected with the cultivation of land. In the economical management of dairies and distilleries, for example, a certain proportion of swine may be considered indispensable. These establishments afford great quantities of sour milk slops, and other refuse matter, which could, in no other way, be converted into any thing useful; yet they are found to be very nutritious to hogs, and when mixed with small portions of more substantial food, are quite adequate to sustain and bring them on to the most desirable size and fatness.

In England there are reckoned not less than twenty different breeds of hogs, which are selected, according as they are adapted by their peculiar characteristics to particular districts, and the food on which it is proposed to rear them. But we do not see any mention of the *Byfield* breed,

* Among the Greeks of old, the athletæ, or wrestlers at the Olympic Games, regularly underwent a course of diatectic discipline, previous to their public contests. The diet consisted chiefly of animal food; *pork* was preferred. Galen says, that if they lived for a day on any other kind of food, they perceived a diminution of strength.

though our researches, from want of leisure, have been limited.

In some future number, we shall devote to this subject a more extended consideration. We shall treat of the natural history of the hog;† of the various breeds, the best course of feeding, and the several modes of curing and preserving the meat; for, although it may be thought that the subject is already well understood, in all these points of view, it may be affirmed, that few of us are so wise, and so few things so well understood, but that some accession of knowledge may be gained by a comparison of different practices and customs, in different parts of the country; our present object, however, is merely to spread before our Maryland and southern readers, the following notice of *ten hogs*, fattened and killed lately in Boston. Let it be contrasted with any thing of the same kind in this quarter. It will be seen, that of the ten hogs, there was but one that did not weigh *a pound* for *every day* it had lived, and many of them considerably more than that.

What must, however, most particularly strike every observer, is the great saving of food, which must attend the raising of a breed of hogs, which get their growth in *so short a period*. In this part of the country, it is well known to be the custom to feed a hog *through one winter*, and until December in the next, before he can be made to weigh 120 or 130 pounds, which is as large as, for family use, is thought to be desirable. Now, supposing the increase of these Boston hogs to have been in regular progression, they must have weighed 150 pounds when they were *only six months old*. We venture to say, that the hogs killed in Maryland, for pork or bacon, do not average 150 pounds each, and that their average age is at least sixteen months; and we have not the least doubt, that many farmers of this state, some of whom may smile at the particularity of these observations, on a matter which they may suppose requires no elucidation—we say, we have no doubt that if many of them would only take the trouble to make a little *calculation* of the expense of raising their hogs, taking into the account the labour they occasion, as well as the actual value of the food they consume, they would find, that in this account, to use a vulgar saying, "they do not save their bacon"—that, like the Indian's gun, "it costs more than it comes to;" and this left-handed management will be found, on examination, to consist in an utter disregard of the qualities of their breeding stock, and their wasteful and utterly inconsiderate *manner of feeding*. And here let us repeat what probably we shall reiterate a thousand times over,

☞ the farmer should habituate himself to making nice *arithmetical calculations of the cost of every thing*; how else can he know the neat profit, or loss, of any thing he consumes or sells?

If, as it would appear by the subjoined account, a breed of hogs may be had, which, being pigged in April or May, in the spring tide of vegetation, will weigh as much in the December following, as our ordinary breed, which require to have been kept *and fed through the preceding winter*; the farmer may easily calculate the saving of expense, to be gained by the acquisition of such a stock. It is apparent, that the rapid and early fattening, and growth of the hogs here spoken of, must be the effect of some peculiarity in their *breed* or in their *treatment*; for every one knows that the cold climate of Boston, is not more congenial to the nature of swine, than the more southern latitudes;—whether, then, it results from superiority of the one or the other, it is equally desirable to be known. Under this impression, and with a desire to manifest the earnestness with which he has undertaken, as far as is within his limited means to aid in all endeavours to improve the agricultural prospects of his country, the Editor of the AMERICAN FARMER, has taken measures to procure the breed of those extraordinary hogs. They will be distributed amongst his friends in the country, at whatever price they cost; the only object being to disseminate the breed, no selfish considerations will be indulged, except that of always giving, in such cases, a preference to his patrons.

COMMUNICATIONS.

TO THE EDITOR OF THE AMERICAN FARMER.

SIR,

Observing in your paper of the 15th inst. a piece signed "*A Spinster*," respecting the cleansing of poultry-houses from vermin, or chicken-lice,—for which information I think the public, as well as myself, are much indebted to her; and, to repay her for the gratitude which I feel, I will inform her, as a good house-wife, how she can keep her beds and bed-rooms clear of vermin, vulgarly called chinch bugs, with very trifling expense or labour.

Make a decoction of sassafras bark, or root, not so strong as to stain the furniture, and scald your bedsteads and the wainscoting of your rooms, once a year, and I will engage a chinch bug will never enter it. This I know from experience. AN OLD MAN.

Calvert County, 30th April, 1819.

QUERIE *by the Editor*.—Since this decoction is found to be so offensive to the vermin of various kinds, may it not be presumed that it would be found equally useful and effective in destroying, or driving off, the *fly*, which infests *tobacco beds* at this season, and proves so destructive to the plant? We hope some planter will try an experiment so easily made, and whereby, if it prove effectual, the greatest impediments to raising plants will be removed. We have been told, that *lime* has been used for this purpose, with success, by Mr. *Benjamin Mead*, of Calvert County; and we have it from good authority, that keeping the beds thinly covered over, until this time, with leafless brush-wood, will keep off the fly. It would seem, that they cannot endure the *shade*, and that clear sun heat is necessary to their existence. But a decoction of sassafras roots, *with the bark on*, is so easily made and applied with a watering pot, that we repeat the hope, that its efficacy may be tested and made known.

TO THE EDITOR OF THE AMERICAN FARMER.

SIR,

I have thought, that an occasional essay, upon general morality, vindicating the providence of our Almighty Father, might not merely be consistent with the general plan of your paper, but acceptable to your readers. For though Agriculture, or rather its promotion, appears to be the prominent object of your pursuit, yet I have observed some well written articles upon other subjects, indicative of an intention not altogether to exclude that variety of speculation, so necessary to the gratification of the taste of every class of readers.

Mr. Cobbett, I think, has somewhere observed, very truly, that it is in Agricultural pursuits, where a man makes the most direct and emphatic appeal to the Parent of all good for a blessing upon his exertions. Who so likely then, to be influenced, by a consideration of his providence; who so likely to be brought to a constant reflection of their immediate dependence on him, as they, who, in pursuit of their regular vocation, are in the habit of making these *direct appeals*; and, who are so richly rewarded for their laborious co-operation with the Parent of Nature?

Man carries with him the crutch of dependence, from the cradle to the grave; both individually and collectively, as he recedes from the cultivation of the soil, he multiplies the occasions for its use, and increases the number of his patrons; his dependence on Deity becomes indirect; and his success in life, on casualties and contingencies, often, that he dare not court the favour of Heaven to bring about. But the tiller of the ground, who earns his bread by the sweat of his brow; who plants and waters, may, with religious confidence, partake of the fruits of his earnings—and in every process of vegetation, from the seed to the full ear, sees causes of admiration and of thankfulness to the bestower.

That the farmer is the most independent, those of every other pursuit admit; that he is the most useful to all, is equally certain; and for these reasons he appears to be in possession of peculiar advantages—and if he has a mind and a disposition to profit, spiritually, from his vocation, few men have so great or so frequent opportunities. Doctor YOUNG has said, that *an undevout astronomer is mad*. The line is as applicable to the farmer as to the astronomer; for the uniform and regular returns seasonably bestowed upon him, in reward for his labours, furnish a constant argument in favour of the goodness of his Creator; and the mystery of vegetation, of his unbounded wisdom. His infinity is traced, in the multiplication and diversity of his productions—and his wisdom, again, in their peculiar fitness—nay, this *fitness of things* bespeaks his constant presence.

I have said, if the farmer chooses to profit

† Different species of animals approximate sometimes so nearly, that the line of distinction can scarcely be discerned. The hog is a remarkable example of this—in number of teeth it resembles the horse, and in having only one stomach. In the position of its intestines, and the shape of its hoof, it is like the cow-kind: it resembles the claw-footed kind, as the lion, the dog, and the cat, in its propensity to eat *flesh*, in its numerous progeny, and in chewing the cud. Swine, therefore, may be said to occupy an intermediate situation between the carnivorous and the herbiferous—inoffensive, like the latter; and, in some respects, ravenous, like the former.

spiritually, from his vocation; if he has a mind to be operated upon—if he inclines to "look through nature up to nature's God," every blade of grass affords a medium, and every kernel of grain a subject of devout speculation, fortifying to his faith and confidence in Deity.

CINCINNATUS.

Present Prices of Maryland Produce in the Baltimore Market.

The last advices from abroad have had a tendency to depress, in some degree, the prices of tobacco, which, during the last week, had been looking up. From Bremen, advices received to the 24th March, at which time, it is stated, that 650 hogsheads Kentucky tobacco had been sold at an average of 6 1-2 stivres; Virginia is quoted at from 7 to 13, and Maryland good, with a good proportion of coloured, is quoted at 12 5-8 stivres.

A stivre may be estimated at two cents, but an allowance of 40 per cent. discount, is to be made for costs and charges and drawbacks, of various kinds; the neat proceeds may be reckoned at the average rate of 13 cents for 11 stivres.

TOBACCO—Patuxent, of good quality, from 11 to 13; three hogsheads from the neighbourhood of Friendship, in Anne Arundel county, sold this week, for $13; wagon tobacco, from $13 to 16; Eastern Shore, $9 to 10; Potomac, $8 to 10.

CORN, white, three loads from Eastern Shore sold for	55
Yellow,	54
WHEAT, white,	$1 50
red,	1 40
FLOUR, from the wagon,	6 50
RYE,	90
OATS, per cargo,	45 to 50

BEEF, butcher's 12 1-2 cents; Mutton, 12 1-2 do.; Veal 12 1-2 do.; Veal, per quarter, from the country, $1 to 1 50; Potatoes, retail in market, $1 per bushel; Eggs, 18 3-4 per dozen; Butter, *very little fit to eat*, best, 50 to 62 1-2 cents per pound; Fowls, $1 25 per pair.

Foreign Intelligence.

Liverpool, April 2.

The Velocipede, alias *Accelerator*, alias the *Pedestrian's Hobby Horse*, alias the *Tracena*, &c. &c. has been fully described, with an accompanying engraving, in a recent number of the *Mercury*, and subsequently in the *Kaleidoscope*. We some time ago predicted, that it would soon be all the rage: and we now find that it is becoming more general every day. We find that one has been manufactured in this town, from the description given in the *Mercury*; and that it has been found to answer beyond the expectation of the makers.

The Ghent *Journal* affirms that the generals Rigaud and Grouchy, are on the eve of returning to France from America. The French government are taking decisive steps to re-establish the fortresses which the Allies had dismantled: 360 pieces of cannon have been ordered from La Rochelle to the eastern frontier, and above 500 condemned pieces had been sent to the foundary of Strasburg to be recast.

A person who left Cadiz on the 13th ult. and who is now in Paris, has communicated the following details relative to the expedition about to be sent to Buenos Ayres:—

"The number of troops is about 13,000, including infantry and cavalry, and already occupy their cantonments in the neighbourhood of that port. Count d'Abisbal (O'Donnell) who commands in chief, and who is appointed Viceroy of Buenos Ayres, assembled in Cadiz 15,000 on the 28th of January last, the day appointed to celebrate the interment of her Majesty, the late Queen. He reviewed them in the place of St. Antoine, in the presence of a considerable body of spectators, which increased the splendour of the ceremony, and who all admired the equipment and steady discipline of the troops.

"All the generals who are attached to the expedition, are at this moment assembled in Cadiz. General O'Donnell is incessantly occupied in enforcing every precaution necessary to accelerate its departure, called to such an important destiny, and which will, without doubt, be the finest that ever left the ports of Spain. The troops are animated with the best spirit, and every thing excites the most pleasing hopes.—*Jour. de Debats.*

Latest from South America.

The ship Sachem, arrived at New York on the 3d instant, from Buenos Ayres, whence she sailed on the 10th of March. Mr. W. G. D. Worthington, Esq. of this city, late consul at that place, arrived in this vessel, and has communicated an interesting detail of recent occurrences in South America. It was reported, that the United States' frigate, Macedonian, arrived at Valparaiso, about the beginning of February.

The president's message had been received at Buenos Ayres, and some remarks made upon it in the papers. They seem to attribute the non-recognition of their independence by the United States, to the impression which has been made this side the tropics, respecting their party dissentions. They expected, that their sovereignty would have been acknowledged in consequence of the favourable report which they anticipated from the commissioners to the congress, but they did not appear to bear the disappointment in an improper manner.

Chili was, by the last accounts, freed from the Royalists. Sanchez, who commanded there, after being beat at Santa Fe, had retired amongst the American Indians. On the 14th Jan. Lord Cochrane sailed from Valparaiso with his squadron; consisting of the Maria Isabel, (the frigate taken from the Spaniards) the San Martin, the Santero, and the Chacabuco, supposed with the intention of touching at Arica, Callcot, &c. and to capture or burn the shipping at the latter place, as they had on board a large store of rockets, and provisions for four months. It was thought this naval expedition would give life and ascendancy to the patriots in Lima. Captain Woster, of the Lautaro, the real hero of the late naval success in Talcuhuana bay, had resigned; lord Cochrane was fond of him, and wished him to remain. His place was filled by Capt. Grise, of the British navy; so that the marine of Chili is now wholly commanded by Englishmen. The British frigate, Andromache, which was said to be taking off from Lima, about $5,000,000 perhaps, bound to Rio Janeiro, it was suspected, would be intercepted by lord Cochrane, under the pretence or doctrine that she was violating her neutral character.

BOSTON PRODUCE.

There were lately slaughtered in the town of Boston, ten Hogs, or rather Pigs, for they were but one year old, on the day they were killed, which, when slaughtered, weighed as follows:—

1	394	6	369
2	392	7	369
3	391	8	368
4	390	9	365
5	369	10	356

Total, *three thousand seven hundred and sixty-three* pounds. Besides 195 lbs. of rough fat taken from the intestines. These animals were pigged in that town, and purchased, when five weeks old, by Mr. Enoch Patterson, inn-keeper in Elm street, and by him fatted in his stable yard. Until November last, they subsisted on the wash and refuse of the kitchen, and since then, have only consumed about ninety bushels of corn and meal. They were of the most modern improved breed; and were viewed by numerous spectators when alive, who not only expressed their surprise at their extreme fatness, and fine form; but at the cleanliness and economy with which they were reared. It is understood that they were sold for $451-56.

FROM A FRIEND TO THE EDITOR.

Dated—*Boston, April* 26, 1819.

Dear Sir,—I have seen Mr. Patterson, who owned the ten hogs mentioned in the notice you enclosed me. He says, that in April last year, he purchased ten barrow pigs, from two litters, owned by the same person, the offspring of a male of the Byfield breed, and of females of a mixed breed. They were taken from the sows when about five weeks old, and kept in a pen under cover, not more in capacity than 200 square feet, occasionally washed, so as to be kept constantly clean, and fed with the swill and refuse bread and meat of his kitchen [a tavern] until November, when a sufficiency of meal was added, to keep them quiet, until January; he then gave them meal wet with the wash of the kitchen, three times a day, and dry corn once, taking care to give them each time as much as they would eat, and no more. It seems, that much depends on keeping them clean, dry, and warm, in cool weather; and cool in hot weather; for his pen is under a shed, where they are always in the shade—this, together with feeding them frequently and equally, so as constantly to give them as much, and no more than they will eat, seems to be the great mean of quick and fat growth.

The Byfield seems to be the most approved breed in this vicinity. If you wish, I will endeavour to procure a pair of this kind for you.

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